

West Virginia Department of Environmental Protection  
*Division of Air Quality*

*Joe Manchin, III*  
Governor

*Stephanie R. Timmermeyer*  
Cabinet Secretary

# Permit to Operate



*Pursuant to*  
**Title V**  
of the Clean Air Act

*Issued to:*  
**CYTEC Industries Inc.**  
Willow Island  
Urethanes (Part 1 of 4)  
R30-07300003-2007

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*John A. Benedict*  
Director

*Issued: October 23, 2007 • Effective: November 6, 2007*  
*Expiration: October 23, 2012 • Renewal Application Due: April 23, 2012*

Permit Number: **R30-07300003-2007**  
Permittee: **CYTEC Industries Inc.**  
Facility Name: **Willow Island Plant**  
Manufacturing Unit: **Urethanes (Part 1 of 4)**  
Mailing Address: **#1 Heilman Avenue, Willow Island, WV 26134**

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*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

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Facility Location: Willow Island, Pleasants County, West Virginia  
Facility Mailing Address: #1 Heilman Avenue, Willow Island, WV 26134  
Telephone Number: (304) 665-3485  
Type of Business Entity: Corporation  
Facility Description: Urethanes Manufacturing  
SIC Codes: 2869 (primary), 2843 (secondary), 2819 and 2899 (tertiary)  
UTM Coordinates: 474.00 km Easting • 4,356.00 km Northing • Zone 17

Permit Writer: Wayne Green

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.*

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*Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.*

## Table of Contents

<b>1.0</b>	<b>Emission Units and Active R13, R14, and R19 Permits .....</b>	<b>4</b>
1.1.	Emission Units .....	4
1.2.	Active R13, R14, and R19 Permits .....	7
<b>2.0</b>	<b>General Conditions.....</b>	<b>8</b>
2.1.	Definitions .....	8
2.2.	Acronyms .....	8
2.3.	Permit Expiration and Renewal .....	9
2.4.	Permit Actions .....	9
2.5.	Reopening for Cause.....	9
2.6.	Administrative Permit Amendments .....	10
2.7.	Minor Permit Modifications .....	10
2.8.	Significant Permit Modification.....	10
2.9.	Emissions Trading .....	10
2.10.	Off-Permit Changes .....	10
2.11.	Operational Flexibility .....	11
2.12.	Reasonably Anticipated Operating Scenarios .....	11
2.13.	Duty to Comply.....	12
2.14.	Inspection and Entry .....	12
2.15.	Schedule of Compliance .....	12
2.16.	Need to Halt or Reduce Activity not a Defense .....	13
2.17.	Emergency .....	13
2.18.	Federally-Enforceable Requirements.....	14
2.19.	Duty to Provide Information .....	14
2.20.	Duty to Supplement and Correct Information .....	14
2.21.	Permit Shield .....	14
2.22.	Credible Evidence.....	15
2.23.	Severability .....	15
2.24.	Property Rights .....	15
2.25.	Acid Deposition Control.....	15
<b>3.0</b>	<b>Facility-Wide Requirements .....</b>	<b>16</b>
3.1.	Limitations and Standards.....	16
3.2.	Monitoring Requirements .....	17
3.3.	Testing Requirements .....	18
3.4.	Recordkeeping Requirements .....	18
3.5.	Reporting Requirements .....	20
3.6.	Compliance Plan .....	22
3.7.	Permit Shield .....	23
<b>4.0</b>	<b>Urethanes Manufacturing Source-Specific Requirements.....</b>	<b>25</b>
4.1.	Limitations and Standards.....	25
4.2.	Monitoring Requirements .....	31
4.3.	Testing Requirements .....	32
4.4.	Recordkeeping Requirements .....	32
4.5.	Reporting Requirements .....	34
4.6.	Compliance Plan .....	35

## 1.0. Emission Units and Active R13, R14, and R19 Permits

### 1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
C002 <sup>4</sup>	No direct vent	First Pass Column	1974	8,200 gallons	None
C020 <sup>4</sup>		Water Stripper	1987	1,800 gallons	None
C030 <sup>4</sup>		MeC Stripper	1974	9,000 gallons	None
C507 <sup>4</sup>		Trimer Removal Column	1989	596 gallons	None
E006 <sup>4</sup>		Cooling Oil Air Cooler	1987	3.45 MMBTU/hr	None
E007 <sup>4</sup>		First Pass Overhead Condenser	1987	700,000 BTU/hr	None
E008 <sup>4</sup>		First Pass Spray Condenser	1987	28,000 BTU/hr	None
E013 <sup>4</sup>		Storage Tank Cooler	1999	50 Tons	None
E015 <sup>4</sup>		Cracking Column Overhead Condenser	1987	1.98 MMBTU/hr	None
E016 <sup>4</sup>		Catalyst Heater	1996	152,000 BTU/hr	None
E021A/B <sup>4</sup>		Circulated Liquid Coolers	1987	150,000 BTU/hr	None
E035 <sup>4</sup>		TMXDI Condenser	1987	269,000 BTU/hr	None
E036A/B <sup>4</sup>		Circulated Methanol Coolers	1987	200,000 BTU/hr	None
E039 <sup>4</sup>		Product Cooler	1974	168,000 BTU/hr	None
E051 <sup>4</sup>		Evaporator Condenser	1996	196 ft <sup>2</sup>	None
E108 <sup>4</sup>		Water Cooled Oil Cooler	1987	218,000 BTU/hr	None
E525 <sup>4</sup>		Methanol Column Cooler	1987	971,000 BTU/hr	None
E528 <sup>4</sup>		MeC Letdown Condenser	1987	1.4 MMBTU/hr	None
E538 <sup>4</sup>		Methanol Column Feed Cooler	1987	4.5 MMBTU/hr	None
E541 <sup>4</sup>		Methanol Column Cooler	1975	1.34 MMBTU/hr	None
E570 <sup>4</sup>		MeC Condenser	1987	1.0 MMBTU/hr	None
E580 <sup>4</sup>		Methanol Circulating Cooler	1987	275,000 BTU/hr	None
H026 <sup>4</sup>		Chilled Oil Refrigeration System	1987	47 tons	None
H027 <sup>4</sup>		Chilled Oil Refrigeration System	2005	80 tons	None
H040 <sup>4</sup>		Wiped Film Evaporator	1996	53 ft <sup>2</sup>	None
H055 <sup>4</sup>		Hot Oil Heater	1996	300 KW	None
H550 <sup>4</sup>		MeC Evaporator	1987	1.0 MMBTU/hr	None
R010 <sup>4</sup>		Cracking Reactor and Column	1987	5,900 gallons	None
V001 <sup>4</sup>		Secondary MeC Stripper	1987	450 gallons	None
V161 <sup>4</sup>		Evaporator Bottoms Receiver	1996	100 gallons	None
V420 <sup>4</sup>		Cracking Column Secondary Condenser	1987	560 gallons	None
V513 <sup>4a</sup>		Bottoms Neutralization Tank	1975	10,000 gallons	None
<u>V516<sup>4</sup></u>		<u>Methanol Storage Tank</u>	<u>1988</u>	<u>17,500 gallons</u>	<u>None</u>
V530 <sup>4</sup>		MeC Reactor	1975	3,350 gallons	None
<u>V540<sup>4</sup></u>		<u>Methanol Column Secondary Condenser</u>	<u>2010</u>	<u>350,000 BTU/hr</u>	<u>None</u>
V552 <sup>4</sup>		Evaporator Bottoms Pot	1987	80 gallons	None
V003	DIP-001	Reactant Storage Tank	1974	525,000 gallons	None
<del>V516</del>	<del>MEC-001</del>	<del>Methanol Storage Tank</del>	<del>1988</del>	<del>17,500 gallons</del>	<del>None</del>

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
V508	MEC-002	Urea/Methanol Slurry Tank	1974	8,300 gallons	E522
V518		Methanol Feed Tank	1974	6,300 gallons	
M507	MEC-003	Urea Rotary Air Lock	1987	28 drums/hr	None
U001		TMXDI Product Drumming	1988	NA	
V514	MEC-004	Bottoms Heavies Box	NA	350 gallons	None
V554	MEC-005	Evaporator Bottoms Receiver	1974	3,325 gallons	None
V500A-C	MEC-006	Recovered Methanol Rail Cars	NA	20,000 gallons	V582
V510		By-product Methanol Rail Car	NA	20,000 gallons	
V574		MeC Condenser Receiver	1987	140 gallons	
V599A-E		Crude MeC Rail Cars	NA	20,000 gallons	
V535	MEC-007	Intermediate Product Receiver	1975 Modified 7/14/87	11,000 gallons	None
V578		Methanol Spray Condenser Receiver	1987	200 gallons	
V577	MEC-008	Methanol Spray Condenser	1987	800 gallons	P590A/B
C539	MEC-009	Methanol Column	1975	5,100 gallons	H599
V584	MEC-010	Crude MeC Storage Tank	1975	18,000 gallons	V583
			Modified 3/15/87		
H530	MEC-011	Hot Oil Heater	1987	21.8 MMBTU/hr	None
V515	MEC-012	Flare Purge Tote	2008	300 gallons	None
V085A	TMI-002	Fresh Methanol Tank Wagon	NA	5,000 gallons	None
V060A	TMI-003	Finished TMU Tank Wagon	NA	5,000 gallons	None
V060B	TMI-005	Finished TMU Tank Wagon	NA	5,000 gallons	None
V102	TMX-003	Caustic Storage Tank	1986	6,570 gallons	None
V107	TMX-004	Sulfuric Acid Storage Tank	1987	6,570 gallons	None
C120	UAM-001	Second Pass Column	1974	7,100 gallons	C102/E120
E024		Second Pass Overhead Condenser			
E100		Catalyst Recovery Vent Condenser	1996	15.7 ft2	
J001/J010 <sup>2</sup>		Production Vacuum System	1987	500 CFM	
J010/J110 <sup>1</sup>		Refining Vacuum System	1987	500 CFM	
P001A/B		Catalyst Recovery Vacuum System	1996	400 CFM	
R001 <sup>2</sup>		Addition Reactor (during TMI to TMU production)	1987	11,900 gallons	
V009 <sup>1</sup>		First Pass Overhead Receiver	1987	550 gallons	
V004		Catalyst Feed Tank	1987	1,250 gallons	
V005		First Pass Spray Condenser	1987	510 gallons	
<a href="#">V010</a>		<a href="#">Methanol Surge Tank</a>	<a href="#">1974</a> <a href="#">Modified 10/2/87</a>	<a href="#">10,700 gallons</a>	
V012		Recovered Catalyst Storage Tank	1975 Modified 11/18/99	15,000 gallons	
V016 <sup>2</sup>		Crude TMXDU Surge Tank (during TMI to TMU production)	1974	19,000 gallons	
V019 <sup>1</sup>		TMI Surge Tank / Crude TMXDI Tank	1974 Modified 7/23/87	11,400 gallons	
V022		Circulating Liquid Tank	1987	535 gallons	

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
V026 <sup>3</sup>	UAM-001	Second Pass Column Overhead Receiver	1987	130 gallons	C102/E120
V032		Methanol Spray Condenser	1987	3,100 gallons	
V033 <sup>1</sup>		Recovered Methanol Tank	1987	1,977 gallons	
V036		TMXDI Product Receiver	1987	500 gallons	
V039 <sup>1</sup>		Crude TMI Storage Tank	1995	100,000 gallons	
V059 <sup>3</sup>		Supercrude TMI Storage Tank	1976 Modified 3/22/00	50,000 gallons	
V080A		Secondary Condensate Tank Wagon	NA	5,000 gallons	
V080B <sup>3</sup>		Recovered TMXDI Tank Wagon (during TMI Distillation)	NA	5,000 gallons	
V085 <sup>1</sup>		Fresh DMF Tank Wagon	NA	5,000 gallons	
V085B <sup>2</sup>		Heavy Polymer Tank Wagon	NA	5,000 gallons	
V110A <sup>3</sup>		Fourth Pass Bottoms Tank Wagon	NA	5,000 gallons	
V110B <sup>3</sup>		Fifth Pass Bottoms Tank Wagon	NA	5,000 gallons	
V110C <sup>3</sup>		Sixth Pass Overhead Tank Wagon	NA	5,000 gallons	
V112		Cracking Column Overhead Receiver	1987	300 gallons	
V116 <sup>1</sup>		First Pass Circulating Liquid Tank	1988	220 gallons	
V120/V220		Catalyst Decanters	1987	1,240 gallons	
V150		Methanol Receiver	1996	20 gallons	
V152		Distillate Receiver	1996	300 gallons	
V185 <sup>1</sup>		Spent DMF Tank Wagon	NA	5,000 gallons	
E022	UAM-002	Water Stripper Overhead Condenser	1987	12MMBTU/hr	P051A/B
E032		MeC Stripper Overheads Receiver/Condenser	1974	1,300 gallons	
V555	UAM-002	DMF Waste Tank Wagon	2008	5,000 gallons	C102/E+120/P051A/B
V560		Recovered DMF Tank Wagon	2008	5,000 gallons	
R001	UAM-003	Addition Reactor (during TMXDI production)	1987	11,900 gallons	K360
V016		Crude TMXDU Surge Tank (during TMXDI production)	1974 Modified 7/23/87	19,000 gallons	
V024		Water Stripper Overhead Receiver	1987	130 gallons	
V160		Vacuum Water Caustic Treatment Tank	1976 Modified 7/23/87	37,600 gallons	
V006	UAM-004	TMXDU Purge Container	NA	400 gallons	None
V105	UAM-005	Sulfuric Acid Calibration Tank	1987	50 gallons	None
V038	UAM-006	Recovered MeC Storage Tank	1974 Modified 7/27/87	13,000 gallons	None
V007	UAM-007	Water Stripper TMXDI Overheads Tank Wagon	2008	5,000 gallons	None
V550	UAM-007	Water Stripper DMF Overheads Tank Wagon	2008	5,000 gallons	None
V401	UAM-008	Water Stripper Overheads Storage Tank	1979	10,235 gallons	None
<del>V010</del>	<del>UCM-004</del>	<del>Methanol Surge Tank</del>	<del>1974</del> <del>Modified 10/2/87</del>	<del>10,700 gallons</del>	<del>None</del>

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
V080B	UCM-005	Recovered TMXDI Tank Wagon (during TMXDI production)	NA	5,000 gallons	None
V070A/B	UCM-006	Bottoms Boxes	1996	400 gallons	None
V121A	UCM-007	Catalyst Decanting Tank Wagon	NA	5,000 gallons	None
V121B/C		Bottoms Tank Wagons	NA	5,000 gallons	
V101	USM-003	TMXDI Storage Tank	1974	12,600 gallons	None
V201	USM-004	TMXDI Storage Tank	1974	10,000 gallons	None
V301	USM-005	TMXDI Storage Tank	1974	12,600 gallons	None
V020	USM-006	TMI Storage Tank	1975	4,000 gallons	None
V002	USM-007	Cooling Oil Storage Tank	1987	6,600 gallons	None
V320	USM-008	Chilled Oil Surge Tank	1974	17,000 gallons	None
			Modified 7/23/87		
V132	USM-010	Hot Oil Storage/Expansion Tank	1974	18,000 gallons	None
V031	USM-011	Catalyst Storage Tank	1987	6,750 gallons	None
V100	UTM-002	TMXDI Trailer Loading	NA	5,000 gallons	None
V130		Finished TMI Tank Wagon	NA	5,000 gallons	
V501		Crude MeC Tank Wagon	NA	5,000 gallons	
V545		Heavies Tank Wagon	NA	5,000 gallons	

<sup>1</sup>Can also vent through UAM-002 when TMI to TMU Process or TMI Distillation Process is operating.

<sup>2</sup>Can also vent through UAM-002 when TMI to TMU Process is Operating.

<sup>3</sup>Can also vent through UAM-002 when TMI Distillation Process is Operating.

<sup>4</sup>Emissions from these emission units vent to another emission unit and do not vent directly to the atmosphere.

## 1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit R13-2473. The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2473GH	<del>February 6, 2008</del> November 1, 2010

## 2.0. General Conditions

### 2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>pph</b>	Pounds per Hour
<b>CO</b>	Carbon Monoxide	<b>ppm</b>	Parts per Million
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>PSD</b>	Prevention of Significant Deterioration
<b>DAQ</b>	Division of Air Quality	<b>psi</b>	Pounds per Square Inch
<b>DEP</b>	Department of Environmental Protection	<b>SIC</b>	Standard Industrial Classification
<b>FOIA</b>	Freedom of Information Act	<b>SIP</b>	State Implementation Plan
<b>HAP</b>	Hazardous Air Pollutant	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>HON</b>	Hazardous Organic NESHAP	<b>TAP</b>	Toxic Air Pollutant
<b>HP</b>	Horsepower	<b>TPY</b>	Tons per Year
<b>lbs/hr or lb/hr</b>	Pounds per Hour	<b>TRS</b>	Total Reduced Sulfur
<b>LDAR</b>	Leak Detection and Repair	<b>TSP</b>	Total Suspended Particulate
<b>m</b>	Thousand	<b>USEPA</b>	United States Environmental Protection Agency
<b>MACT</b>	Maximum Achievable Control Technology	<b>UTM</b>	Universal Transverse Mercator
<b>mm</b>	Million	<b>VEE</b>	Visual Emissions Evaluation
<b>mmBtu/hr</b>	Million British Thermal Units per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>mmft<sup>3</sup>/hr or mmcf/hr</b>	Million Cubic Feet Burned per Hour		
<b>NA or N/A</b>	Not Applicable		
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		



### **2.3. Permit Expiration and Renewal**

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.  
**[45CSR§30-5.1.b.]**
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.  
**[45CSR§30-4.1.a.3.]**
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.  
**[45CSR§30-6.3.b.]**
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.  
**[45CSR§30-6.3.c.]**

### **2.4. Permit Actions**

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.  
**[45CSR§30-5.1.f.3.]**

### **2.5. Reopening for Cause**

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
- a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.
  - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
  - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
  - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.
- [45CSR§30-6.6.a.]**

## **2.6. Administrative Permit Amendments**

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.  
[45CSR§30-6.4.]

## **2.7. Minor Permit Modifications**

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.  
[45CSR§30-6.5.a.]

## **2.8. Significant Permit Modification**

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.  
[45CSR§30-6.5.b.]

## **2.9. Emissions Trading**

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.  
[45CSR§30-5.1.h.]

## **2.10. Off-Permit Changes**

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
  - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
  - c. The change shall not qualify for the permit shield.
  - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
  - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

**[45CSR§30-5.9.]**

## **2.11. Operational Flexibility**

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

**[45CSR§30-5.8]**

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

**[45CSR§30-5.8.a.]**

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

**[45CSR§30-5.8.c.]**

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

**[45CSR§30-2.39]**

## **2.12. Reasonably Anticipated Operating Scenarios**

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
  - b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
  - c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.
- [45CSR§30-5.1.i.]**

## **2.13. Duty to Comply**

- 2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- [45CSR§30-5.1.f.1.]**

## **2.14. Inspection and Entry**

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
    - a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
    - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.
- [45CSR§30-5.3.b.]**

## **2.15. Schedule of Compliance**

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
  - a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

- b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.  
[45CSR§30-5.3.d.]

## **2.16. Need to Halt or Reduce Activity not a Defense**

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.  
[45CSR§30-5.1.f.2.]

## **2.17. Emergency**

- 2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.  
[45CSR§30-5.7.a.]
- 2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.  
[45CSR§30-5.7.b.]
- 2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.  
[45CSR§30-5.7.c.]
- 2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.  
[45CSR§30-5.7.d.]

- 2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.  
[45CSR§30-5.7.e.]

## **2.18. Federally-Enforceable Requirements**

- 2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.  
[45CSR§30-5.2.a.]
- 2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

## **2.19. Duty to Provide Information**

- 2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.  
[45CSR§30-5.1.f.5.]

## **2.20. Duty to Supplement and Correct Information**

- 2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.  
[45CSR§30-4.2.]

## **2.21. Permit Shield**

- 2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.  
[45CSR§30-5.6.a.]
- 2.21.2. Nothing in this permit shall alter or affect the following:
- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
  - b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.  
[45CSR§30-5.6.c.]

## **2.22. Credible Evidence**

- 2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.  
[45CSR§30-5.3.e.3.B. and 45CSR38]

## **2.23. Severability**

- 2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.  
[45CSR§30-5.1.e.]

## **2.24. Property Rights**

- 2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.  
[45CSR§30-5.1.f.4]

## **2.25. Acid Deposition Control**

- 2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.
  - a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.
  - b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
  - c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.  
[45CSR§30-5.1.a.2.]

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40 C.F.R. §61.145(b) and 45CSR15]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.  
[45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.  
[W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.



- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

**[40 C.F.R. 82, Subpart F]**

- 3.1.8. **Risk Management Plan.** This stationary source, as defined in 40 C.F.R. § 68.3, is subject to Part 68. This stationary source shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. Part 68.10. This stationary source shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

**[40 C.F.R. 68]**

- 3.1.9. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.

**[45CSR§7-5.1.]**

- 3.1.10. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.

**[45CSR§7-5.2.]**

- 3.1.11. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 (i.e. *C102/E102, K360, V582, V583*) and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in R13-2473 or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

**[45CSR13, R13-2473, 4.1.4.]**

- 3.1.12. Maintenance operations shall be exempt from the provisions of 45CSR§7-4 (*Sections 4.1.13 [45CSR§7-4.1.] and Section 4.1.14 [45CSR§7-4.2.]*), provided that at all times the owner or operator shall conduct maintenance operations in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.

**[45CSR§7-10.3.]**

- 3.1.13. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2473, R13-2473A, R13-2473B, R13-2473C, R13-2473D, R13-2473E, R13-2473F and R13-2473G, [R13-2473H](#), and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.

**[45CSR13, R13-2473, 2.5.1.]**

## **3.2. Monitoring Requirements**

- 3.2.1. *Reserved*

### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:
- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
  - b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
  - c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

[WV Code § 22-5-4(a)(15) and 45CSR13]

### 3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.  
**[45CSR§30-5.1.c.2.A., 45CSR13, R13-2473, 4.4.1.]**

3.4.2. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.  
**[45CSR§30-5.1.c.2.B., 45CSR13, R13-2473, 3.4.1.]**

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.  
**[45CSR§30-5.1.c. State-Enforceable only.]**

3.4.4. The Urethanes Manufacturing Unit has been determined to be subject to only the following recordkeeping requirements of 40 C.F.R. Part 63 Subpart EEEE – “National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)” (OLD MACT).

1. For each storage tank subject to 40 C.F.R. Part 63 Subpart EEEE having a capacity of less than 18.9 cubic meters (5,000 gallons) and for each transfer rack subject to this subpart that only unloads organic liquids (i.e., no organic liquids are loaded at any of the transfer racks), you must keep documentation that verifies that each storage tank and transfer rack identified in 40 C.F.R. § 63.2343 (a) is not required to be controlled. The documentation must be kept up-to-date (i.e., all such emission sources at a facility are identified in the documentation regardless of when the documentation was last compiled) and must be in a form suitable and readily available for expeditious inspection and review according to 40 C.F.R. § 63.10 (b) (1), including records stored in electronic form in a separate location. The documentation may consist of identification of the tanks and transfer racks identified in 40 C.F.R. § 63.2343 (a) on a plant site plan or process and instrumentation diagram (P&ID).

2. You must keep records of the total actual annual facility-level organic liquid loading volume as defined in 40 C.F.R. § 63.2406 through transfer racks to document the applicability, or lack thereof, of the emission limitations in Table 2 to 40 C.F.R. Part 63 Subpart EEEE, items 7 through 10.  
**[45CSR34; 40 C.F.R. §§ 63.2343 (a), 63.2390 (a), 63.2390 (d)]**

3.4.5. The permittee shall monitor all fugitive particulate emission sources as required by 3.1.9. To ensure that a system to minimize fugitive emissions has been installed or implemented. Records shall be maintained on site stating the types of fugitive particulate capture and/or suppression systems used, the times these systems were inoperable, and the corrective actions taken to repair these systems.  
**[45CSR§30-5.1.c.]**

3.4.6. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures as required by 3.1.10 applied at the facility.  
**[45CSR§30-5.1.c.]**

3.4.7. **Mandatory Greenhouse Gas Reporting.** An owner or operator that is required to report GHGs under 40 C.F.R. 98 must keep records as specified in 40 C.F.R. §98.3(g). All required records shall be retained for at least 3 years. The records shall be kept in an electronic or hard-copy format (as appropriate) and recorded in a form that is suitable for expeditious inspection and review. Upon request by the Administrator, the records required under 40 C.F.R. §98.3(g) must be made available to EPA. Records may be retained off site if the records are readily available for expeditious inspection and review. For records that are electronically generated or maintained, the equipment or software necessary to read the records shall be made available, or, if requested by EPA, electronic records shall be converted to paper documents. The permittee shall retain the records specified in 40 C.F.R. §98.3(g), in addition to those records prescribed in each applicable subpart of 40 C.F.R. 98. [40 C.F.R. §98.3(g)]

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.  
**[45CSR§30-4.4. and 5.1.c.3.D.]**
- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.  
**[45CSR§30-5.1.c.3.E.]**
- 3.5.3. All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, mailed first class or by private carrier with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

#### **If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
  
Phone: 304/926-0475  
FAX: 304/926-0478

#### **If to the US EPA:**

Associate Director  
Office of Enforcement and Permits Review  
(3AP12)  
U. S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

- 3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.  
**[45CSR§30-8.]**

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4.

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

c. Every report submitted under this subsection shall be certified by a responsible official.

[45CSR§30-5.1.C.3.D.]

- 3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

**[45CSR§30-4.3.h.1.B.]**

3.5.10. **Greenhouse Gas Reporting Requirements.** When applicable, as determined in permit section 3.1., greenhouse gas emissions shall be reported pursuant to 45CSR§42-4. as follows:

- a. In accordance with a reporting cycle provided by the Director, affected sources shall report to the Director the quantity of all greenhouse gases emitted above *de minimis* amounts in the years specified by the Director.
- b. Affected sources shall only be required to report annual quantities of anthropogenic non-mobile source greenhouse gases emitted at the stationary source, and shall not be required to report biogenic emissions of greenhouse gases.
- c. The Director shall determine the form and format of the information reported by affected sources under permit condition 3.5.10.a to ensure that the information is consistent as possible with developing regional, national, or international greenhouse gas emissions programs.
- d. Notwithstanding the provisions of permit condition 3.5.10.c, to satisfy the greenhouse gas emission reporting requirements under this section, affected sources may submit greenhouse gas emissions inventory information from documented greenhouse gas inventories such as those provided to the Environmental Protection Agency's Climate Leaders Program, Chicago Climate Exchange Registry, the International Organization for Standardization and the SF<sub>6</sub> Emissions Reduction Partnership for Electric Power Systems. Greenhouse gas emissions inventory information from other widely recognized and verified greenhouse gas emissions inventory programs may be submitted by affected sources under this subsection, but shall be subject to approval by the Director on a case-by-case basis.
- e. Reports of greenhouse gas emissions submitted to the Director under this permit condition shall be signed by a responsible official and shall include the following certification statement: "I, the undersigned, hereby certify that the data transmitted to the West Virginia Department of Environmental Protection is true, accurate, and complete, based upon information and belief formed after reasonable inquiry."
- f. Greenhouse gases reported under this section are not subject to fees under 45CSR30, unless the greenhouse gases are otherwise regulated by the Director.

**[45CSR§§42-4.1 through 4.6, State-Enforceable only.]**

3.5.11. **Mandatory Greenhouse Gas Reporting.** The owner or operator of a facility or supplier that is subject to the requirements of 40 C.F.R. 98 must submit GHG reports to the Administrator, as specified in 40 C.F.R. §98.3. The annual GHG report must be submitted no later than March 31 of each calendar year for GHG emissions in the previous calendar year. **[40 C.F.R. §98.3]**

### **3.6. Compliance Plan**

- 3.6.1. None

### 3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

<b>45CSR17</b>	To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter. Per 45CSR§17-6.1, the Urethanes manufacturing unit is not subject to 45CSR17 because it is subject to the fugitive particulate matter emission requirements of 45CSR7.
<b>40 C.F.R. 60, Subpart K</b>	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. There are no petroleum liquid storage tanks in the Urethanes manufacturing unit.
<b>40 C.F.R. 60, Subpart Ka</b>	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 19, 1978, and Prior to July 23, 1984. There are no petroleum liquid storage tanks in the Urethanes manufacturing unit.
<b>40 CFR 60 Subpart Kb</b>	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. Tank size or vapor pressures of the stored chemicals are below the applicability thresholds of 40 C.F.R. part 60 Subpart Kb.
<b>40 C.F.R. 60 Subpart VV</b>	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. The Urethanes manufacturing unit does not produce as intermediates or final products any of the materials listed in 40 C.F.R. § 60.489.
<b>40 C.F.R. 60 Subpart DDD</b>	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry. The Urethanes manufacturing unit does not manufacture polypropylene, polyethylene, polystyrene, or polyethylene terephthalate for which this rule applies.
<b>40 C.F.R. 60 Subpart III</b>	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes. The Urethanes manufacturing unit does not produce any of the chemicals listed in 40 C.F.R. § 60.617 as a product, co-product, by-product, or intermediate.



<b>40 C.F.R. 60 Subpart NNN</b>	Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The Urethanes manufacturing unit does not produce any of the chemicals listed in 40 C.F.R. § 60.667 as a product, co-product, by-product, or intermediate.
<b>40 C.F.R. 60 Subpart RRR</b>	Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. The Urethanes manufacturing unit does not produce any of the chemicals listed in 40 C.F.R. § 60.707 as a product, co-product, by-product, or intermediate.
<b>40 C.F.R. 63 Subpart F</b>	National Emission standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON).” 40 C.F.R. 63, Subparts F, G, and H do not apply to manufacturing process units that do not meet the criteria in 40 C.F.R. §§ 63.100 (b) (1), (b) (2), and (b) (3). <u>CYTEC is only subject to the requirements of 40 C.F.R. 63, Subpart F, G, H as they apply under 40 C.F.R. 63, Subpart FFFF (MON).</u>
<b>40 C.F.R. 63 Subpart G</b>	
<b>40 C.F.R. 63 Subpart H</b>	
<b>40 C.F.R. Part 63 Subpart DD</b>	National Emission Standards for Hazardous Air Pollutants From Off-Site Waste and Recovery Operations. The Urethanes manufacturing unit does not receive off-site materials as specified in paragraph 40 C.F.R. § 63.680 (b) and the operations are not one of the waste management operations or recovery operations as specified in 40 C.F.R. §§ 63.680 (a) (2) (i) through (a) (2) (vi).
<b>40 C.F.R. Part 63 Subpart JJJ</b>	National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins. The Urethanes manufacturing unit does not produce the materials listed in 40 C.F.R. § 63.1310.
<b>40 C.F.R. Part 63 Subpart PPPP</b>	National Emission standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products. The Urethanes manufacturing unit does not produce an intermediate or final product that meets the definition of “surface coated” plastic part.
<b>40 C.F.R. Part 63 Subpart WWW</b>	National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production. The Urethanes manufacturing unit does not engage in reinforced plastics composites production as defined in 40 C.F.R. § 63.5785 and does not manufacture composite material as defined in 40 C.F.R. § 63.5935.
<b>40 C.F.R. Part 64</b>	The Urethanes Unit does not have any pollutant specific emissions units (PSEU) at this facility that satisfy all of the applicability criteria requirements of 40 CFR § 64.2 (a), i.e., that: 1) have pre-control regulated pollutant potential emissions (PTE) equal to or greater than the “major” threshold limits to be classified as a major source; 2) are subject to an emission limitation or standard and; 3) have a control device to achieve compliance with such emission limitation or standard. Therefore, the Urethanes Unit is not subject to the Compliance Assurance Monitoring (CAM) rule.



**4.0. Urethanes Manufacturing Source-Specific Requirements [Emission Points ID (DIP-001, MEC-001, MEC-002, MEC-003, MEC-004, MEC-005, MEC-006, MEC-007, MEC-008, MEC-009, MEC-010, MEC-011, MEC-012, TMI-002, TMI-003, TMI-005, TMX-003, TMX-004, UAM-001, UAM-002, UAM-003, UAM-004, UAM-005, UAM-006, UAM-007, UAM-008, UCM-004, UCM-005, UCM-006, UCM-007, USM-003, USM-004, USM-005, USM-006, USM-007, USM-008, USM-010, USM-011, UTM-002)]**

**4.1. Limitations and Standards**

- 4.1.1. Maximum allowable emissions to the atmosphere from the Urethanes Business Unit shall not exceed the following limitations, dependent upon the process(es) currently in operation in the Urethanes Business Unit.

Emission Point	Emission Unit ID	Pollutant	Emission Limit	
			LB/hr	TPY
Emission Limits when any Urethanes Manufacturing Unit Process is On-Line				
USM-007	V002	VOC	1.0	0.1
USM-008	V320	VOC	0.1	0.1
USM-010	V132	VOC	0.1	0.3
MEC-011	H530	CO	1.8	7.9
		NO <sub>x</sub>	2.2	9.4
		PM	0.2	0.9
		SO <sub>2</sub>	0.1	0.1
		VOC	0.2	0.7
Emission Limits when TMI to TMU Process is On-Line				
TMI-002	V085A	VOC	0.1	0.10
		THAP	0.1	0.10
TMI-003	V060A	VOC	0.4	0.20
		THAP	0.3	0.15
TMI-005	V060B	VOC	0.4	0.20
		THAP	0.3	0.15
UAM-001 <i>or</i> UAM-002	C102	VOC	2.0	0.90
		THAP	1.8	0.75
<del>UCM-004</del>	<del>V010</del>	<del>VOC</del>	<del>0.1</del>	<del>0.10</del>
		<del>THAP</del>	<del>0.1</del>	<del>0.10</del>
Emission Limits when Methanol Recovery Operation is On-Line				
MEC-006	V582, V574, V500A-C	VOC	0.70	0.50
		THAP	0.70	0.50
MEC-007	V578, V535	VOC	0.39	0.30
		THAP	0.39	0.30
MEC-008	P590A/B	VOC	0.10	0.10
		THAP	0.10	0.10
UTM-002	V545	VOC	0.30	0.30
		THAP	0.30	0.20

Emission Point	Emission Unit ID	Pollutant	Emission Limit	
			LB/hr	TPY
Emission Limits when DMF Recovery Operation is On-Line				
UAM-002	V555, V560, P051A/B, J001/J101	VOC	0.1	0.1
		THAP	0.1	0.1
UAM-003	V024	VOC	0.1	0.1
		THAP	0.1	0.1
UAM-007	V550	VOC	0.4	0.1
		THAP	0.4	0.1
<del>UCM-004</del> UAM-001	V010	VOC	0.1	0.1
		THAP	0.1	0.1
Emission Limits when TMI Distillation Process is On-Line				
MEC-003	U001	VOC	0.1	0.10
UAM-001 <i>or</i> UAM-002	P051A/B, C102/E120	VOC	0.3	0.20
		THAP	0.2	0.10
USM-006	V020	VOC	0.1	0.10
UTM-002	V130	VOC	0.1	0.10
Emission Limits when TMXDI and Crude TMI Production Process is On-Line				
DIP-001	V003	VOC	0.1	0.1
MEC-003	U001	VOC	0.1	0.1
MEC-006	V510, V582	VOC	0.2	0.1
		THAP	0.2	0.1
MEC-010	V583	VOC	0.1	0.4
		THAP	0.1	0.2
TMX-003	V102	PM	0.1	0.1
TMX-004	V107	PM	0.1	0.1
UAM-001	C102/E120	VOC	1.75	5.6
		THAP	1.75	5.6
UAM-002	P051A/B	VOC	0.6	1.9
		THAP	0.2	0.65
UAM-003	K360	VOC	0.1	0.1
		THAP	0.1	0.1
UAM-004	V006	VOC	0.2	0.1
UAM-005	V105	PM	0.1	0.1
UAM-006	V038	VOC	0.3	0.8
		THAP	0.1	0.1
UAM-007	V007	VOC	0.6	2.0
		THAP	0.6	2.0
UAM-008	V401	VOC	0.1	0.1
		THAP	0.1	0.1
<del>UCM-004</del>	<del>V010</del>	<del>VOC</del>	<del>0.1</del>	<del>0.3</del>
		<del>THAP</del>	<del>0.1</del>	<del>0.3</del>

Emission Point	Emission Unit ID	Pollutant	Emission Limit	
			LB/hr	TPY
UCM-005	V080B	VOC	0.1	0.1
UCM-006	V070A/B	VOC	0.1	0.1
UCM-007	V121A-C	VOC	0.2	0.4
USM-003	V101	VOC	0.1	0.1
USM-004	V201	VOC	0.1	0.1
USM-005	V301	VOC	0.1	0.1
USM-011	V031	VOC	0.1	0.1
UTM-002	V501	VOC	0.1	0.1
<b>Emission Limits when Methyl Carbamates Process is On-Line</b>				
<del>MEC-001</del>	<del>V516</del>	<del>VOC</del>	<del>12.8</del>	<del>1.65</del>
		<del>THAP</del>	<del>12.8</del>	<del>1.65</del>
MEC-002	E522, V508	VOC	1.5	0.52
		THAP	0.8	0.51
MEC-003	M507	PM	1.2	0.47
MEC-004	V514	VOC	0.1	0.01
MEC-005	V554	VOC	0.1	0.01
MEC-006	V599A-E, V574	VOC	0.1	0.25
		THAP	0.1	0.1
MEC-007	V578, V535	VOC	1.8	2.2
		THAP	1.76	2.1
MEC-008	P590A/B, V577	VOC	0.6	2.00
		THAP	0.6	2.00
MEC-009	H599, C539	CO	0.1	0.02
		NO <sub>x</sub>	0.4	1.15
		PM	0.1	0.01
		SO <sub>2</sub>	0.1	0.01
		VOC	7.2	25.12
		THAP	6.1	21.30
MEC-010	V584	VOC	0.1	0.10
		THAP	0.1	0.10
MEC-012	V515	VOC	0.2	0.7
		THAP	0.2	0.7
UTM-002	V001	VOC	0.2	0.03
		THAP	0.1	0.02

**[45CSR13, R13-2473, 4.1.1. and Appendix A]**

- 4.1.2. The following operating parameters of the DMF Scrubber/Vent Condenser C102/E120 shall be maintained while the TMI to TMU, the TMI Distillation, the TMXDI, or the DMF Recovery process is on-line:
- The scrubbing liquor flow rate to the DMF scrubber shall be a minimum of 6.5 gpm.

- b. The process outlet temperature of the DMF scrubber vent condenser E120 shall be maintained at a maximum of 0°C.
- c. While only TMI to TMU and/or TMXDI process(es) are on-line, the methanol concentration of the DMF scrubbing fluid shall be checked at a minimum daily and shall be recharged with fresh DMF if the methanol concentration is 20% by weight or greater.

**[45CSR13, R13-2473, 4.2.1.]**

4.1.3. The following operating parameter of the methanol spray condenser V032 shall be maintained:

- a. The recirculated chilled methanol temperature shall be a maximum of -6°C while the TMI to TMU process is on-line.
- b. The recirculated chilled methanol temperature shall be a maximum of -4°C while the TMXDI process is on-line.

**[45CSR13, R13-2473, 4.2.2.]**

4.1.4. The following operating parameter of the methanol spray condenser V577 shall be maintained while the methanol recovery operation is on-line:

- a. The recirculated chilled methanol temperature shall be a maximum of 6°C.

**[45CSR13, R13-2473, 4.2.3.]**

4.1.5. The following operating parameter of the Venturi jet water scrubber V582 shall be maintained while the methanol recovery operation is on-line:

- a. The scrubbing liquor flow rate shall be a minimum of 2.6 gpm.

**[45CSR13, R13-2473, 4.2.4.]**

4.1.6. The following operating parameter of the Venturi jet water scrubbers V582, V583, and K360 shall be maintained while the TMXDI process is on-line:

- a. The scrubbing liquor flow rate shall be a minimum of 2.6 gpm.

**[45CSR13, R13-2473, 4.2.5.]**

4.1.7. The following operating parameter of the water ring vacuum pump P590A/B shall be maintained while the methyl carbamate process is on-line or when the water ring vacuum pump is required to maintain vacuum service during the methanol recovery operation:

- a. The scrubbing liquor flow rate shall be a minimum of ~~10.0~~ 3.0 gpm.

**[45CSR13, R13-2473, 4.2.6.]**

4.1.8. The following operating parameter of the Graham vacuum pump P051A/B shall be maintained while the TMXDI or the DMF recovery process is on-line:

- a. The scrubbing liquor flow rate shall be a minimum of 20.0 gpm.

**[45CSR13, R13-2473, 4.2.7.]**

- 4.1.9. The following operating parameter of the methanol vent condenser E522 shall be maintained while the methyl carbamate process is on-line:
- a. The refrigerated oil temperature at the condenser outlet shall be a maximum of -7°C.  
**[45CSR13, R13-2473, 4.2.8.]**
- 4.1.10. The following operating parameter of the flare H599 shall be maintained while the methyl carbamate process is on-line:
- a. The flare shall be equipped with a pilot light to ensure that the waste gases from the methanol column are ignited at the start of each batch. The pilot light shall have a flame-out detection and reignition system which will automatically attempt to reignite the pilot light if it goes out. If the pilot light cannot be automatically reignited, a control panel alarm shall be activated, and this flame-out alarm shall be recorded (date, time, and operator's initials) in the Operator's Log. The flame-out alarm will also require an investigation of the flare, and the results of this investigation and any additional actions to reignite the pilot light shall be recorded in the Operator's Log. If the pilot light cannot be reignited, the control room operator will not proceed with the next batch in the methyl carbamate reactor.  
**[45CSR13, R13-2473, 4.2.9.]**
- 4.1.11. The following operating parameter of the Venturi jet water scrubber K360 shall be maintained while the DMF Recovery process is on-line:
- a. The scrubbing liquor flow rate shall be a minimum of 2.6 gpm.  
**[45CSR13, R13-2473, 4.2.10.]**
- 4.1.12. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in 45CSR§7 subsections 3.2 and 3.7.  
**[45CSR§7-3.1., TMX-003, TMX-004, UAM-005, MEC-003]**
- 4.1.13. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A.

Emission Point ID No.	45CSR7 Maximum Allowable Particulate Emission Limit
	lb/hr
TMX-003	28.0
MEC-003	8.0

Compliance with the 45CSR§7-4.1 hourly emission limit for TMX-003 and MEC-003 shall be demonstrated through compliance with the more stringent hourly particulate emission limit set forth in Section 4.1.1.  
**[45CSR§7-4.1., TMX-003, MEC-003]**

- 4.1.14. Mineral acids shall not be released from any type source operation or duplicate source operation or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity given in Table 45-7B found at the end of this rule. Per Table 45-7B, the allowable stack gas concentration of sulfuric acid mist emissions for source operations installed after July 1, 1970 is 35 mg/dscm. **[45CSR§7-4.2., TMX-004, UAM-005]**

- 4.1.15. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where, the factor, F, is as indicated in Table I below:

**Table I:** Factor, F, for Determining Maximum Allowable Particulate Emissions

Incinerator Capacity	Factor F
Less than 15,000 lbs/hr	5.43
15,000 lbs/hr or greater	2.72

$$\text{H599: } 5.43 \times 0.49 \text{ tons/hr} = 2.66 \text{ lbs/hr allowable PM}$$

Compliance with the 45CSR§6-4.1 hourly emission limit for H599 shall be demonstrated through compliance with the more stringent hourly particulate emission limit set forth in Section 4.1.1.

**[45CSR§6-4.1.]**

- 4.1.16. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. (H599)  
**[45CSR§6-4.3.]**

- 4.1.17. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average. (H530)  
**[45CSR§2-3.1.]**

- 4.1.18. No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air from all fuel burning units located at one plant, measured in terms of pounds per hour in excess of the amount determined as follows:

For Type 'b' fuel burning units, the product of 0.09 and the total design heat inputs for such units in million B.T.U.'s per hour, provided however that no more than six hundred (600) pounds per hour of particulate matter shall be discharge into the open air from all such units.

$$\text{H530: } 21.8 \text{ MMBtu/hr} \times 0.09 = 1.96 \text{ lb/hr total allowable PM}$$

Compliance with the 45CSR§2-4.1.b hourly emission limit for H530 shall be demonstrated through compliance with the more stringent hourly particulate emission limit set forth in Section 4.1.1.

**[45CSR§2-4.1.b.]**

- 4.1.19. No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

For type 'b' and Type 'c' fuel burning units, the product of 3.1 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

$$\text{H530: } 21.8 \text{ MMBtu/hr} * 3.1 = 67.6 \text{ lb/hr total allowable SO}_2$$

Compliance with the 45CSR§10-3.1.e hourly emission limit for H530 shall be demonstrated through compliance with the more stringent hourly sulfur dioxide limit set forth in Section 4.1.1.

**[45CSR§10-3.1.e.]**

4.1.20. The Urethanes Manufacturing Unit has been determined to be subject to the following requirements of 40 C.F.R. 63, Subpart FFFF - "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing" (MON MACT):

a. **Continuous Process Vents.** The permittee shall comply with each emission limit in Table 1 to Subpart FFFF and each applicable requirement specified in 40 C.F.R. §63.2455 for the continuous process vents.

**[45CSR34, 40 C.F.R. §63.2455; Table 1 to Subpart FFFF]**

b. **Storage Tanks.** The permittee shall comply with either the vapor balancing alternative of 40 C.F.R. §63.2470(e) or the emission limits of Table 4 to Subpart FFFF for each applicable Urethanes Group 1 storage tank in accordance with the applicable requirements of 40 C.F.R. §63.2470.

**[45CSR34, 40 C.F.R. §63.2470; Table 4 to Subpart FFFF]**

c. **Equipment Leak Detection and Repair (LDAR) Program.** The permittee shall comply with each applicable requirement of 40 C.F.R. §63.2480 and Table 6 to Subpart FFFF, and either Part 63 Subpart H, Part 63 Subpart UU or Part 65 Subpart F for the applicable Urethanes equipment components that are in organic HAP service.

**[45CSR34, 40 C.F.R. §63.2480; Table 6 to Subpart FFFF]**

d. **Wastewater Streams.** The permittee shall comply with the applicable requirements of 40 C.F.R. §§63.105, 63.132 through 63.148, 63.2485 and Table 7 to Subpart FFFF for the Urethanes wastewater streams.

**[45CSR34, 40 C.F.R. §63.2485; Table 7 to Subpart FFFF]**

e. **Heat Exchange Systems.** The permittee shall comply with the applicable requirements of 40 C.F.R. §§63.104, 63.2490 and Table 10 to Subpart FFFF for the Urethanes cooling/heat exchange systems.

**[45CSR34, 40 C.F.R. §63.2490; Table 10 to Subpart FFFF]**

## **4.2. Monitoring Requirements**

4.2.1. For the purpose of determining compliance with the opacity limits of Sections 4.1.16 [45CSR§6-4.3] and 4.1.12 [45CSR§§7-3.1 and 3.2], and, the permittee shall conduct visible emission checks or opacity monitoring and recordkeeping for all emission points and equipment subject to an opacity limit.

Monitoring shall be conducted initially at least once per month with a maximum of forty-five (45) days between consecutive readings. After three consecutive monthly readings in which no visible emissions are observed from any of the subject emission points, those emission points will be allowed to conduct visible emission checks or opacity monitoring once per calendar quarter. If visible emissions or opacity are observed during a quarterly monitoring from an emission point(s), then that emission point(s) with observed emissions or opacity

shall be required to revert to monthly monitoring. Any emission point that has reverted to monthly monitoring shall be allowed to again conduct quarterly visible emission checks or opacity monitoring only after three consecutive monthly readings in which no visible emissions are observed from the subject emission point.

These checks shall be conducted by personnel trained in the practices and limitations of 40 C.F.R. 60, Appendix A, Method 9 or Method 22, or 45CSR7A, during periods of normal operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. For observations of visible emissions from any emission point(s) which follows a water scrubber, when condensed water vapor is present in the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible; the observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct an opacity reading using the procedures and requirements of 45CSR7A within seventy-two (72) hours of the first signs of visible emissions. A 45CSR7A evaluation shall not be required if the visible emission condition is corrected within seventy-two (72) hours after the visible emission and the sources are operating at normal conditions.

[45CSR§30-5.1.c., MEC-003, TMX-003, TMX-004, UAM-005 and H599]

- 4.2.2. The permittee shall perform all required monitoring in compliance with the applicable general provisions of Subpart FFFF, per 40 C.F.R. §§63.2450 and 63.2540 and Table 12 to Subpart FFFF, and Part 63 Subpart A. [45CSR34, 40 C.F.R. §63.2450, §63.2540; Table 12 to Subpart FFFF; 40 C.F.R. Part 63, Subpart A]

### 4.3. Testing Requirements

- 4.3.1. *Reserved*

### 4.4. Recordkeeping Requirements

- 4.4.1. Compliance with the emission limits set forth in Section 4.1.1 shall be demonstrated by calculating emissions for every product/process in the Urethanes Business Unit using appropriate engineering calculations, process models, and actual process data. When these emissions are calculated, each emission point listed in Section 4.1.1 shall be included in the calculation and accounted for in the actual emissions record. The calculations shall be maintained current for all processes, process modifications and new variants. The Director of the Division of Air Quality may specify or may approve other valid methods for compliance determination when he/she deems it appropriate and necessary.

[45CSR13, R13-2473, 4.1.3]

- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-2473, 4.4.2.]

- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.



d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

**[45CSR13, R13-2473, 4.4.3.]**

4.4.4. The permittee shall maintain the following records for any month in which the Urethanes Business Unit is on-line, dependent upon the process as follows:

Process	Parameters to be Monitored and Recorded on a Daily Basis when Process is On-Line
TMI to TMU	Daily Average DMF Scrubber (C102) Rate in gallons per minute (gpm)
	Daily DMF Scrubber (C102) Methanol Percentage
	Daily Average Condenser (E120) Outlet Temperature in °C
	Daily Average Chilled Recirculated MeOH Temperature to Condenser (V032) in °C
Methanol Recovery	Daily Average Water Flow Rate to Scrubber (V582) in gpm
	Daily Average Water Flow Rate to Pump (P590A/B) in gpm
	Daily Average Chilled Recirculated MeOH Temperature to Condenser (V577) in °C
DMF Recovery	Daily Average DMF Scrubber (C102) Rate in gpm
	Daily Average Condenser (E120) Outlet Temperature in °C
	Daily Average Scrubber (K360) Flow rate in gpm
	Daily Average Vacuum Pump (P051A/B) Flow Rate in gpm
TMI Distillation	Daily Average DMF Scrubber (C102) Rate in gpm
	Daily Average Condenser (E120) Outlet Temperature in °C
TMXDI and Crude TMI Production	Daily Average DMF Scrubber (C102) Rate in gpm
	Daily DMF Scrubber (C102) Methanol Percentage
	Daily Average Condenser (E120) Outlet Temperature in °C
	Daily Average Chilled Recirculated MeOH Temperature to Condenser (V032) in °C
	Daily Average Vacuum Pump (P051A/B) Flow Rate in gpm
	Daily Average Scrubber (V582) Flow Rate in gpm
	Daily Average Scrubber (V583) Flow Rate in gpm
Methyl Carbamate	Daily Average Scrubber (K360) Flow Rate in gpm
	Daily Average Water Flow Rate to Pump (P590A/B) in gpm
	Daily Average Chilled Oil Temperature from Condenser (E522) in °C
	Pilot Light Flame-out Alarm Occurrence on Flare (H599)

These records shall be maintained in accordance with condition 3.4.2 of this permit and made available upon request to the Director or his designated representative.

**[45CSR13, R13-2473, 4.4.4.]**

- 4.4.5. The data acquired by use of the calculations set forth in Section 4.4.1 and the results thereof, detailed descriptions of any other compliance procedures, and accurate production records shall be maintained on-site for a period of five (5) years and made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request.

**[45CSR13, R13-2473, 4.4.5.]**

- 4.4.6. The permittee shall maintain on-site for a period of five (5) years, quarterly emissions reports along with a running four (4) quarter tabulation of emissions calculated by the method described in Section 4.4.1. Certified copies of these records shall be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request.

**[45CSR13, R13-2473, 4.4.6.]**

- 4.4.7. Record keeping requirements used to demonstrate compliance with the operating parameters of the DMF Scrubber/Vent Condenser (C102/E120) are provided in 4.4.4 for the TMI to TMU Process, the TMI Distillation Process, and the TMXDI and Crude TMI Production Process.

**[45CSR§30-5.1.c.]**

- 4.4.8. The owner or operator shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner to be established by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request. Where appropriate the owner or operator of a fuel burning units(s) may maintain such records in electronic form.

**[45CSR§2-8.3.c. and 45CSR§2-8.3.d., H530]**

- 4.4.9. Records of each visible emission observation and each Method 9 (i. e. opacity reading using the procedures and requirements of 45CSR7A) evaluation conducted in accordance with 4.2.1 shall be maintained on site for a period of no less than five (5) years. The visible emission observation records shall include, but not be limited to, the date, time, name of the emission unit, the applicable visible emissions requirements, the results of the observations, what action(s), if any, was/were taken, and the name of the certified Method 9 observer.

**[45CSR§30-5.1.c., H599, MEC-003, TMX-003, TMX-004, UAM-005, H530]**

- 4.4.10. **40 C.F.R. 63, Subpart FFFF.** The permittee shall maintain records in accordance with 40 C.F.R. §§63.2450, 63.2525, 63.2540, and Table 12 to Subpart FFFF, and any records required by Part 63, Subpart A, and as applicable in referenced Subparts F, G, H, SS, UU, WW, and GGG of Part 63, and 40 CFR Part 65, Subpart F **[45CSR34, 40 C.F.R. §63.2450; §63.2525; §63.2540, Table 12 to Subpart FFFF; 40 C.F.R. Part 63, Subparts A, F, G, SS, UU, WW, GGG, 40 C.F.R. Part 65, Subpart F]**

#### **4.5. Reporting Requirements**

- 4.5.1. If the permittee emits greater than 50 pounds per calendar year of any Hazardous Air Pollutants (HAPs) other than Methanol (CAS 67-56-1) and Dimethyl Formamide (CAS 68-12-2) from any emission point listed in Section 4.1.1, the permittee shall provide written notification to the Director within thirty (30) days after such emissions. This written notification shall include the potential to emit (in pph and tpy) for each new HAP species from each of the emission points listed in Section 4.1.1. The permittee shall not emit 2 pph or 5 tpy or more of any HAP or combination of HAPs in excess of the limits established in Section 4.1.1 without obtaining a modification of R13-2473.

**[45CSR13, R13-2473, 4.1.2]**

- 4.5.2. **40 C.F.R. 63, Subpart FFFF.** The permittee shall submit all required applicable reports and notifications per the requirements of 40 C.F.R. §§63.2450, 63.2515, 63.2520, 63.2540, Table 11 and Table 12 to Subpart FFFF, and Part 63 Subpart A.

**[45CSR34, 40 C.F.R. §63.2450; §63.2515, §63.2520; §63.2540, Table 11 and Table 12 to Subpart FFFF; 40 C.F.R. Part 63, Subpart A]**

#### **4.6. Compliance Plan**

- 4.6.1. None